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EXAMINER

BURLESON, MICHAEL L

ART UNIT PAPER NUMBER

2626

DATE MAILED: 04/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/639,278

Applicant(s)

HIRUMA, TAKASHI

Examiner

Michael Burleson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 16 and 17 is/are allowed.
- 6) ☒ Claim(s) 1-9, 12, 14, 15 and 18-21 is/are rejected.
- 7) ☒ Claim(s) 10, 11 and 13 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 August 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>2</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-9, 12, 14, 15 and 18-21 are rejected under 35 U.S.C. 102(e) as being anticipated by Kawano US 6256112.
3. Regarding claim 1, Kawano teaches of a difference detecting section (4) that calculates the absolute value of the difference of each pair of color components, (column 7, lines 11-14 and 51-58) which reads on a reference value determining part that determines a reference value with respect to a target element in an image based upon a color attribute of the target element. Kawano teaches that of a density distribution determining section (5) obtains color density distribution for each line (column 7, lines 19-24 and 59-60), which reads on judging condition setting part that sets a judging condition based upon the reference value. He also teaches of a color/monochrome determining section (8) that determines whether the original is to be color or monochrome based on the number of lines counted (column 7, lines 40-45), which reads on monochrome/color judging part that judges that the target element is

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monochrome if the color attribute of the target element meets the judging condition and that the target element is colored if the color attribute of the target element does not meet the judging condition.

4. Regarding claim 2, Kawano teaches that based on the result of the color type determination, the print mode of the printer section (3) is set to a desired mode (column 10, lines 52-54 and figure 1), which reads on a selecting part that selects monochrome image processing or color image processing for every predetermined unit according to the judging result of the monochrome/color part.

5. Regarding claim 3, Kawano teaches that the print mode is set based on the result of color type determination by the color type determining device (1), (column 6, lines 55-63) which reads on the selecting part selects the monochrome image processing when all the target elements included in the predetermined unit are judged to be monochrome and selects the color image processing when any one of the target elements included in the predetermined unit is judged to be colored.

6. Regarding claim 4, Kawano teaches that the printer section (3) is a printing means, (column 6, lines 43-44) which reads on the predetermined unit corresponds to a page unit or job unit.

7. Regarding claim 5, Kawano teaches that the image data is made up of m pixel vertically by n pixels horizontally, (column 6, lines 64-67 and column 7, lines 1-5) which reads on all pixels in the image are rendered to be target elements.

8. Regarding claim 6, Kawano teaches that "one line" means the pixels in a domain read from a the image by the scanner (2) is made up of n pixels, (column 7, lines 1-5)

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which reads on part of pixels in the image are rendered to be the target elements respectively.

9. Regarding claim 7, Kawano teaches that the image data is made up of m pixel vertically by n pixels horizontally, (column 6, lines 64-67 and column 7, lines 1-5) which reads on all pixel groups in the image are rendered to be target elements.

10. Regarding claim 8, Kawano teaches that "one line" means the pixels in a domain read from a the image by the scanner (2) is made up of n pixels, (column 7, lines 1-5) which reads on part of pixel groups in the image are rendered to be the target elements respectively.

11. Regarding claim 9, Kawano teaches that the color components that are read are CMY values from 0-255 (column 6, lines 38-40) and of a difference detecting section (4) that calculates the absolute value of the difference of each pair of color components, (column 7, lines 11-14 and 51-58) which reads on a reference value determining part that determines a reference value with respect to a target element in an image based upon plural color component values possessed by the target element.

12. Regarding claim 12, Kawano teaches that the color components that are read are CMY values from 0-255 (column 6, lines 38-40), he also teaches that the judging range is variably set in response to the reference value. (figure 6b and column 8, lines 9-45)

13. Regarding claim 14, Kawano teaches that the density values for each color components are comparatively close (column 8, lines 25-27) He also teaches of a color/monochrome determining section (8) that determines whether the original is to be

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color or monochrome based on the number of lines counted (column 7, lines 40-45), where one line means pixels in a domain (column 7, lines 1-5), which reads on monochrome/color judgment is executed for every color component.

14. Regarding claim 15, Kawano teaches that the density distribution determining section (5) can be freely changed (column 11, lines 25-35), which reads on a part that enables a user to variably set at least one of a determining condition of the reference value and a setting condition of the judging range.

15. Regarding claim 18, Kawano teaches of a density distribution determining section (5) that determines whether a line is color or monochrome (column 7, lines 19-25) and he teaches that the density distribution determining section has a predetermined threshold, which is used to determine the color of the line (column 9, lines 22-29). He also teaches that the density distribution determining section (5) can be freely changed. (column 11, lines 25-35) This reads on a monochrome/color judging part that judges whether image data is color data or monochrome data based upon a predetermined judging criterion and a judging criterion variably setting part that variably sets the predetermined judging criterion in the monochrome/color judging part.

16. Regarding claim 19, Kawano teaches that the threshold values are changed according to the kind of original (column 11, lines 25-35), which reads on the judging criterion variably setting part adaptively sets the predetermined judging criterion based upon the image data itself.

17. Regarding claim 20, Kawano teaches of a difference detecting section (4) that calculates the absolute value of the difference of each pair of color components (column

7, lines 11-14 and 51-58), which reads on a reference value determining part that determines a reference value with respect to a target element in an image based upon a color attribute of the target element. Kawano teaches that of a density distribution determining section (5) obtains color density distribution for each line (column 7, lines 19-24 and 59-60), which reads on setting a judging condition based upon the reference value. He also teaches of a color/monochrome determining section (8) that determines whether the original is to be color or monochrome based on the number of lines counted (column 7, lines 40-45), which reads on judging whether the target element is monochrome or colored from the color attribute of the target element based upon the judging condition.

18. Regarding claim 21, claim 21 is rejected for the same reasons as claim 1 and furthermore, figure 3 shows a flowchart which implies an image processing program, which reads on a recording medium readable by a computer, the medium storing an image processing program that causes the computer to execute instructions comprising the functions for: determining a reference value with respect to a target element in an image based upon a color attribute of the target element; setting a judging condition based upon the reference value and judging that the target element is monochrome if the color attribute of the target element meets the judging condition and that the target element is colored if the color attribute of the target element does not meet the judging condition.

Allowable Subject Matter

19. Claims 10,11,13 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

20. The following is an examiner's statement of reasons for allowance for claims 16 and 17:

21. Regarding claim 16, prior art of record, specifically Kawano (US 6256112) fails to teach or suggest the collective key features of invention, such as a third judging part that judges whether the target element is monochrome or color from a comparison of brightness of the target element.

22. Regarding claim 17, prior art of record, specifically Kawano (US 6256112) fails to teach or suggest the collective key features of invention, such as the features stated in claim 16 and a second reference value determining part, a second judging condition setting part, a second monochrome/color judging part.

Conclusion

1. Any inquiry concerning this communication should be directed to Michael Burleson whose telephone number is (703) 305-8683 and fax number is (703) 746-3006. The examiner can normally be reached Monday thru Friday from 8:00 a.m. –

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4:30p.m. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kimberly Williams can be reached at (703) 305-4863

Michael Burleson
Patent Examiner
Art Unit 2626

MIb
April 17, 2004

MYB

KAWilliams
KIMBERLY WILLIAMS
SUPERVISORY PATENT EXAMINER